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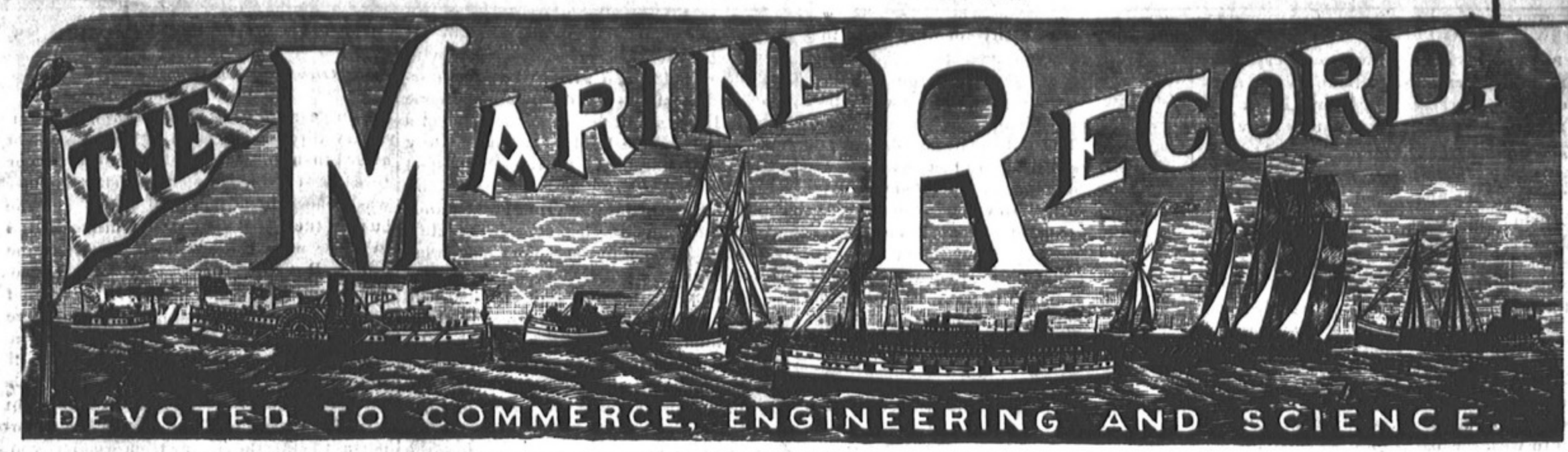

VOL. VII. NO. 1. CLEVELAND. O., JANUARY 1, 1885. $2.00 PER ANNUM SINGLE COPIES 5 CENTS

AROUND THE LAKES.

CLEVELAND.

Ships were first copper-bottomed in 1783.

The propeller Luella Worthington will get a new boiler this winter. It is not yet known who will build it.

Captain B. Inman, of the propeller Kasota has arrived at his home in Port Huron. He reports a very good season.

Captain Robert Greenhalgh's tug Worswick sunk at her dock last week, caused probably by the oakum working out.

Commissioner Patten says that on June 30, 1884, our sea-going marine numbered 6,636 vessels with a tonnage of 3,700,404.

It is said that the pleasure-boat associations of Lake Erie are already preparing plans for a grand carnival at Kelleys Island, to take place after the July regatta.

United States Commissioner Earl Bill had a hearing this week in the case of the schooner Thomas Gawn vs. the propeller Saginaw Valley, with a view of ascertaining the amount of damage sustained by the schooner.

The steamyacht Irene, built by Champness, for Messrs. Teasdale and McBeth, is getting her finishing touches, and will be ready to start by rail for Jacksonville, Fla., on Monday. She is a handsome craft.

Mr. H. D. Coffinberry, president of the Globe Shipbuilding Co., who has been, with his family, to San Francisco and other Pacific coast ports for rest and recreation, returned home last week. He visited the New Orleans exposition on the return trip.

An ice gorge threatened the river property again this week, the water being within a few inches of the street level. Street Commissioner Bueltner, with a force of men, averted the damages. Give us an iron ice breaker and fire tug. When both elements get at the work of destruction the pockets begin to bleed.

Mayor S. B. Grummond, of Detroit, has commenced suit against the city of Cleveland, in the common pleas court, for damages sustained by the steamer Atlantic in a collision with the Viaduct draw, October 14, 1883. The damage is set at $350, and the suit is based on the alleged carelessness of the Viaduct engineer.

FRANKFORT.

Special to the Marine Record.

The staunch little propeller I. M. Weston, came up from Manistee to day bringing freight and passengers. She left this evening.

On the 24th the Geo. D. Sandfort made a revenue trip to Manistee and return.

South Manistee Island light closed down on December 12th.

Captain Geo. Waters, new tug is progressing finely at the shipyard. Tugs Hall and Slyfield are now in winter quarters. Snow is about 14 inches deep. C. B.

OGDENSBURG.

Repairs are being made on the propeller Haskell, at George Hall's marine railway. They are only temporary, but in the spring a new track and a new carriage will be added to the railway by which the Haskell can be taken out and put in condition for next season's work.

TOLEDO.

A. W. Colton, manager of the Wabash line of steamers, has received word that the propeller Morley, ashore at Grand Marais is broken in two. The lake has been so rough that she could not be boarded and it is not likely that the underwriters will save anything except her machinery.

CHICAGO.

Special to the Marine Record.

Steady rain on Saturday and Sunday last caused the ice in the river to thaw rapidly and flow out into the lake; the river is now nearly clear of ice.

The Vessel Owners Towing Association, will hold their annual meeting on Tuesday the 13th, January at 10 a. m.

The tug T. T. Morford got a new Tarrant wheel and went out of Miller Brothers drydock on Saturday.

The tug Admiral towed the schooner R. B. Hayes, to Miller Brothers shipyard on Saturday, where she was placed in drydock.

The schooner Mystic, has been sold to Captain John Wylie. Consideration $3,500.

The drydocks at this port are filled and the work upon the various crafts in dock is being proceeded with rapidly this week in consequence of the mild weather, last week very little could be done because of the severity of the weather.

The steambarge C. W. Moore of Saugatuck, Mich., has been sold to Hart Brothers of Green Bay, consideration $12,000 she will be converted into a passenger and freight boat and will run between Green Bay and Manistique.

The propeller R. P. Ranney is receiving a through calking inside and out.

The steambarge Albert Soper, Captain J. Hogan is having her pilot house and texas moved forward and nine feet cut off her cabin. These alterations will increase her carrying capacity and enable her to carry 50,000 feet more lumber.

We are greatly pleased to know that Captain C. Baker of the schooner Thomas Hume is in a fair way for recovery, he has been suffering greatly for a month past from a severe attack of inflammatory rheumatism.

The following petition is receiving a large number of signatures at this port:

To the Illinois delegation in Congress.

We the undersigned vessel owners and merchants in the shipping trade on the great lakes of the northwest, present to you the following petition:

For the last two years Congress has so reduced the appropriation for the signal service that it seems evident they fail to realize the benefits to the public derived from the weather predictions, storm warnings etc. The shipping interest has been greatly benefited by these reports, and especially so by the storm warnings given at the different lake stations. Great losses have been prevented and no doubt many lives were saved by these timely warnings. It is said by the chief signal officer in his annual report that "The abandonment of stations rendered unavoidable by lack of funds necessarily interfers with weather predictions" This seems reasonable. It also stands to reason that with a large appropriation and consequent increased facilities, greater accuracy can be attained. This being the case the increase asked for dwindles into insignificance when compared with the result. We therefore urge you to use your greatest endeavors to have an increased appropriation made for the next fiscal year.

Some hours after J. S. Dunham's tug T.T. Morford went out of dock it was discovered her wheel would not work; his diver went down to examine the stern bearing, which is lignumvitae, thinking that it had become swollen but it was found all right. It was then discovered the water in her stern pipe around the shaft had become frozen so hard that the shaft would not work until steam was injecteded through the stuffing box. She is now doing duty at the waterworks crib.

The Goodrich steamer DePere arrived Monday at 4 p. m. with a full load of merchandise from west side lake ports. Captain Stine reports that he encountered lots of ice which caused considerable inconvenience. The DePere unloaded and took her departure at 8 a. m. Tuesday. She will go as far as Lilly Bay below Sturgeon Bay canal this trip. T. W.

MILWAUKEE.

Captain Thomas Davidson of Milwaukee has been awarded the contract for repairing the United States revenue steamer Andrew Johnson. His bid was $17,775.

KINGSTON.

One of the M. T. Co's barges was launched at Portsmouth recently. It got stuck on the ways and is now frozen in. It may remain at Portsmouth all winter.

Captain Wm. Skellen had a narrow escape from a watery grave by breaking through the ice about a hundred yards from shore at Peterson's ferry. He was rescued by Henry Rathbun.

Judge Price gave judgment in the triangular case of Donnelly v. Ross and Dominion Salvage & Wrecking Co. vs. Ross for salvage service performed on the Conqueror last fall. The petition of Donnelly has been dismissed with costs, and the Wrecking Company has been awarded $1,500. An appeal to the Supreme court is probable.

The tug Seymour has arrived at Portsmouth with five barges to be laid up. All the K. & M. Co's barges are wintering there.

The sidewheel steamer, which will be placed on the Gananoque-Clayton route next season, will be about the size of the steamer Hero, after the model of the St. Lawrence, and capable of running fourteen miles an hour.

A justly indignant captain, writing to the Kingston News, says: Having received a masters certificate last spring on the payment of four dollars, I wish to enquire what benefit is derived by masters and mates who hold certificates on these inland waters. I have known several cases where men have sailed steamers during the season, that held no certificates, and I have also noticed that several collisions, one with loss of life and several total loss of vessels, have occurred, but I have not heard of any investigation having been held, inquiring into the cause of those disasters. If it was only for the purpose of getting four dollars out of masters of vessels that could poorly afford it, I am of the opinion the sooner the money is returned the better.

The steamer Pierpont has gone into winter quarters.

The following craft are in winter quarters at Gananoque; steamers Prince Arthur, Rothsay, steambarge Nile, barge Bedford, steamer Deseronto and schooner B. W. Folger.

Captain Gaskin has returned from a trip west. His mission was to buy oak with which to carry on the M. T. Co.'s repairs this winter. He reports that he has secured a large quantity, sufficient for the amount of work to be done, and consequently is prepared to engage, say, 125 men during the winter.

DETROIT.

Special to the Marine Record.

December 29—There is but little of interest at the present time in this immediate locality, and there is a dullnes such as has been rarely recorded at this period of the season at Detroit. A quietus prevails at all the shipyards and nothing worthy of mention is going on, while last season the scene was far different, and at each yard frames were up and the construction of large steamers well under way, with a large force of men employed. At the present time at the Detroit Drydock the propeller Oconto is in dock having her recent damages righted, occassioned by ice on entering Lake St. Clair from the canal. Had she reached Detroit with the accident omitted, her trip would probably have been an unusually profitable one, but the result will show far different, and it would have been better had she laid up earlier. Yet the past records show up that at the close of each season there is some craft that is desirous of making just one more trip to make the season's earnings balance more properly, and as a consequence, they get caught, to say nothing of the hardships many of them undergo. There is also the schooner Thomas P. Sheldon, in the Detroit drydock having damages repaired from her mishap near the close of the season on Middle Island, Lake Huron. Her damages were estimated at $1,500 on the hull, which the public are given to understand was the sum total of her misfortunes. Her bill for repairs will exceed that amount, but who is the party that rescued the vessel and what will that sum reach, and to this query you can be safe in placing the figures at three times the above sum. This is what must be done each and every season in estimating the losses to our lake shipping. As I have heretofore recounted in such matter, and now repeat, that a steamer or vessel may strand on Fighting Island, in the Detroit river, and rest there possibly two or three days, is rescued without the least damage and afterward calls at Detroit. The captain is asked as to the results, and informs the reporter there were no damages. "But how much does it cost the vessel to get released?" "Oh, as to that, it will not vary far from $500 or $1,000." Now, here is the whole thing in a nutshell and substantiates my method of forming estimates of losses each and every year. I noticied in a Toronto paper a few days since a marine statement giving the entire losses on hull and cargo at $600,000. Now I choose to show that individual a better hand than that and can affirm it beyond contradiction. I claim that there were 884 disasters on the lakes during the season of 1884, resulting in losses on hull and cargo to the amount of $1,676,300, and the figures are above, rather than below, that sum, for no losses have been taken into consideration below $100. But I will return to my yarn. As above stated, only the two vessels I have mentioned are in the Detroit Drydock, and it requires but little more than a corporal's guard to attend to their wants, when they will be released, and as for other work beyond this, Mr. Coule, one of the foremen, stated yesterday he knew of none.

At the Springwells drydock the City of Detroit had some repairs made, and is out again. The steambarge Tecumseh is at present there undergoing repairs of damages

[Continued on 4th page.]

(Marine)

MARITIME LAW.

APPORTIONMENT OF SALVAGE—SETTLEMENT BETWEEN OWNERS OF VESSEL AND CREW—OWNERS ENTITLED TO COMPENSATION FOR RISK OF DEVIATION INCURRED IN SALVAGE.

United States District Court, Southern District of New York.

Thomas Markham and snother against William Simpson, Jr., and Mark Shaw.

Brown, J.—This action was brought by two of the crew of the brig Redowa, to recover for their share of salvage moneys which had been previously received and distributed by the defendants for the rescue of the bark John E. Chase.

About 4 p. m. of June 13, 1878, the Redowa, being on a voyage from New Orleans to Fall River, when off Ferrandina, fell in with the bark John E. Chase, which was derelict and abandoned. The first mate and two seamen, including one of the libelants, were sent off by the captain of the Redowa in a small boat to examine the derelict vessel. Before dusk they returned and reported her salvable. The Redowa lay by her until next morning, when the mate and two others of the crew were sent aboard, and she was navigated under sail into Tybee Roads, which she reached on the 17th of June. The Redowa kept her company, sending her provisions daily by a small boat. At Tybee Roads the Captain remained to take charge of the Chase and to enforce claims for salvage, while the Redowa completed her voyage to Fall River, which she reached in safety on June 26th. On the following day powers of attorney were given to the defendants by all the members of the crew to settle the claims for salvage By the 2d of July following an amicable settlement was effected in New York with the owners of the vessel and with the underwriters of the cargo, by an allowance of thirty per cent. of their value, for the salvage services. The Chase was valued at $12,500 and her cargo at $45,000. The gross amount of salvage thus received was somewhat above $18,000, and deducting actual expenses netted about $15,000. Two-thirds of this was paid to the owners of the Redowa, and one-third to the captain and crew. The two libelants received $100 each and gave a receipt in settlement and a release in full. They were informed of the amount distributed among the crew, and do not seek now to disturb the distribntion among them. They allege in their libel that they were not informed of the whole amount of salvage received, nor of the amount paid to the owners of the vessel, and they so testify. No fraud is alleged in the libel or sustained by the proof. The respondents testify in general that the whole matter was explained to all the members of the crew, but can give no particulars. The libelants do not testify that any inaccurate statement was made to them, or that any inquiries made on their part were not properly answered. The libel was not filed until July 27, 1882, some four years after the distribution and releas. After this lapse of time little reliance can be placed on the testimony as to the details of conversation so long ago. It is sufficient to say that nothing approaching actual or constructive fraud is either proved or suggested.

Upon such facts, and after so long delay, the court even in the case of seamen would not disregard a settlement and general release unless it clearly appeared that the distribution made was so grossly wrong and unfair as to amount, of itselt, to a presumptive fraud upon the seamen. (The Afrika 5 Prot. Div. 192; The James Armstrong, 33 Law T. 390.) If there be any prevailing rule in cases subject to so great differences as cases of salvage, it is to allow to the salving vessel one half in the absence of special circumstances. (Cohen's Admiralty 152; Sonderberg vs. Ocean Tow Boat Co., 3 Woods. 146.) The German Code, Art. 751, prescribes, absolutely, one-half to the salving vessel in the absence of any contrary stipulation.

The circumstances of this case are almost wholly devoid of these elements which go to make up a highly meritorous service in the salvors. The weather was calm and mild, except some roughness on the first day. There was no danger, no special skill, no occasion for the display of personal enterprise, bravery or daring. The duties of the crew who remained on the Redowa were unchanged and not sensibly affected, except taking provisions daily for three days in a small boat from one vessel to another a short distance in a calm sea. The sum of $5,000, distributed to the master and crew for these services, would seem to be an ample compensation. The only material danger and risk which the salvage in fact involved was in making the owners of the Redowa liable as insurers of their own vessel and of her cargo, by reason of the deviation to effect the salvage service. (The Henry Ewbank, 1 Story 425; the Nath. Hooper, 3 Story 544, 578.) The amount thus put at the risk of the owners was large, viz., some $18,000 for the value of the Redowa and $85,000 for the value of her cargo. That such a deviation is a proper and important element in the distribution of a salvage award is now well settled. The rule was adopted in this country, as early as 1792, in the case of LaBelle Creole (1 Peters, 31, 39, 45,) where three-fourths of the award was given to the ship. In the case of the Waterloo (Blatchf. & H 114,) elaborately considered by Betts, J., in this court, the same rule was applied by him, giving two-thirds to the owner of the vessel, though the labors of the crew were very much greater than in the present case. The same proportion was allowed by Dr. Lushington in the Scindia and the True Blue 1 P. C. 241, 250. See also the Farnley Hall, 46, Law 7, N. S. 216; Searmanga vs. Stamp, 5 Cl. Div. 295; the Waterloo, 2 Dodson 443.

The services of the mariners being of a very inferior order of merit in this case, and there being no material risk on their part, while they employed the owners property in saving the derelict vessel, and in so doing imposed a heavy risk upon the owners by the deviation, I think the allowance of two-thirds is such as the court itself would have made, and the libel is therefore dismissed.

Geo. W. Carr for libelants; Jas. K. Hill, Wing & Shoudy and H. Putnam for respondents.

Decided December 11, 1884.

GENERAL NEWS.

The mortality among sailors from shipwrecks averages one in every 4,000 according to official statistics—so says the writer of a paper reeently read before the French Academy of Medicine.

Steamship Oregon (Br), McMicken, which sailed from New York December 17, 7:30 a. m. for Queenstown and Liverpool, passed Fastnet at 7 p. m. of December 23, making the passage in six days, 6 hours and 52 minutes, the fastest eastern passage on record.

The bureau of navigation of the navy department announces that the computations and discussions of the observation and experiments for determining the velocity of light have been completed, and are being prepared for publication.

The workmen employed at the Boston navy yard in tearing apart the old United States war ship Virginia find the wood in a good state of preservation. This is attributed to the fact that her timbers were well salted. Large lumps of salt have been taken from her that were put there over seventy years ago, when she was constructed.

Jay Gould says: I believe that after the 1st of January we shall begin a new era. I think that the year 1885 will be a money making year. The balance of the trade of the world is now in our favor. Foreign nations are buying of us more then we are buying of them. They are paying us the difference in hard gold coin. Millions of this reaches us on every incoming steamer." Mr. Gould may be a little to unanmious, but such talk is a good deal better then predicting disaster.

The customs officers at Victoria, British Columbia, have at last succeeded in capturing the American schooner Fleetwing, one of the most daring smugglers on the Pacific coast. She had just landed her cargo of Chinamen, which was run in near Foulbay during the night, and when daylight appeared the vessel lay off one of the islands becalmed and was easily taken. She has been employed during the summer in smuggling Chinamen into the United States from British Columbia, and on her return trip would smuggle the cargo into Canadian territory.

In a recent description of the mammoth Elevator D of the Lake Superior Elevator Co., the Lake Superior News, Duluth Minn., says: The machinery of the house is driven by a steeple compound engine, made by the Cuyahoga Works, of Cleveland, with cylinders 44x48" and 24x48." It has four-foot stroke and is of 600 nominal horse power. It has a new feature in the shape of a short intermediate head which does away with one stuffing box. There are two steel boilers 6½x16'. The cost of engine and boiler is $25,000, and the writer understands that there is not as elegant or complete a piece of machinery in the whole northwest as this engine.

The navy department reports that the 'electric plant' for incandescent lighting, which was supplied to the U. S. S. Trenton, has given great satisfaction, notwithstanding some defects in the insulation of the wires, and has added materially to the comfort and health of the officers and crew, and therefore the Atlanta, Boston, and Omahaare to be lighted by electricity. The plant for the Atlanta will be supplied by the U. S. electric-lighting company of New York; that for the Boston, by the B rush electric company of Cleveland; and that for the Omaha, by the Consolidated electric-light company of New York. The merits of the various systems may thus be determined.

At a meeting of the stockholders of the Lake Superior Elevator Company, held in Duluth, on the 23d, it was definitely decided to build another elevator at Duluth for the business of the coming year, with a capacity of 1,500,000 bushels, and it is understood that the Union Improvement and Elevator Company will also build another of 1,000,000 bushels capacity. The erection of these elevators has been rendered absolutely necessary by the proportions which the grain trade at Duluth has assumed and by reason of the fact that the trade is increasing rapidly. During the past season Duluth shipped very nearly, if not quite, as much wheat as Chicago, and there is already in store there for the winter 4,500,000 bushels. There will be 6,000,000 bushels in store by next spring. The capacity of the Duluth elevators, when the new houses are completed, will be 8,700,000 bushels.

LOSS OF LIFE ON STEAM VESSELS.

General Dumont Supervising Inspector General of Steam Vessels, in his annual report says the total loss of life was 271 persons, 13 less than the previous year. But for the unfortunate accident to the steamer Columbus the number of lives lost during the year would have been less than for many years past. Reference is made to the case with more regret for reason that the accident could not and would not have occurred except for gross remission in duty of the commanding officer of the ship, who yielded to the temptation of going to sleep while acting as pilot of his ship when at the time she was being navigated through the most perlious portion of her voyage. This accident shows how impotent are the wisest precautions of the law when their execution depends upon human fallibility and power of endurance, Referring to accidents of explosion the supervising inspector general says: "Though the number of such accidents was less than in previous years, it is to be regretted that the number had not been still less than it was, particularly as it has been charged and not satisfactorily disapproved that one notable accident of this nature (the Riverdale) was chargeable to the inattention to duty of an officer in the inspection service charged with the inspection of steamers' boilers." He reports an unexpended balance in the treasury to the credit of the inspection service $570,956.

THAT PESKY WINSLOW.

Apropos to the account of the unsuccessful effort of the Canadian authorities to capture the tug Winslow on Lake Huron, published recently, there was another attempt to capture the redoutable Captain Swaine and his vessel. This time the St. Mary's river and the peaceful Canadian Sault was the scene of the warlike preparations. The Winslow came up and went on to Lake Superior. The Canadian officials on the other side of the river got wind of the affair and thought the Winslow was up to her usual tricks and on her way to the Owen Sound, ashore near Michipicoten. Acting on this suspicion Captain Wilson, the customs officer on the other side, loaded two cannons on the Canadian tug Charleton and was about to put the militia aboard and proceed to the scene of the wreck and capture the outlaw craft. But these preparations were not completed before the Winslow put in an appearance at the canal, having only gone on a peaceful mission to White Fish Point. The Canadian warriors put away their little guns and quietly crept into their holes, and the Winslow went down the river, and thus a bloody conflict was no doubt avoided.—*Chippewa County News.*

SHIPBUILDING IN NEW BRUNSWICK.

Special Correspondence Marine Record.

ST. JOHN, N. B., December 29.

Ten years ago this port was a hive of industry through the building of ships. Not a yard then in it but what had either two or three vessels on the stocks. The hammer was echoed in a thousand places and the buzz of the steam saw was a familiar sound to those who came within a mile of the mills. But now the scene is all changed. Where once stood the keels of big ships and a thousand busy mechanics swarmed there now stands nothing but a pile of old, weather beaten lumber. The workmen have all left and the grass is growing rank in the team tracks. This revolution has been brought about by two factors, the first and most important being the change from wood to iron, and the second from sail to steam. Shipbuilding then was the most important industry, not only of this port, but also of her northern sister, Quebec, which competed for a share of the work in the construction of wooden sailing vessels. The upper provinces have almost entirely lost their occupation, and it is only a question of a very short time when New Brunswick will have ceased altogether to build ships. Timber is getting scarce and dearer, and iron is getting more plentiful and cheaper, because science has improved the ways of manfacturing it for marine uses. The material that has always been used in British America for vessels has been soft wood (spruce) which sailors have nicknamed "cabbage wood" because of its tenderness. The present prices for wooden ships are as follows:

St. John, N. B., built spruce ships.....$45 per ton.
Bath, Me., built, oak ships..... 53 per ton.

These figures are very little less than it costs for an iron Clyde built ship, and, in fact, the Yankee ships cost far more, as will be seen by the following quotation:

Glasgow, Scotland, built, iron ships...$50 per ton.
Glasgow, Scotland, built, steel ships... 55 per ton.
Newcastle, Eng., built, steel ships... 57 per ton.
Newcastle, Eng., built, iron ships... 48 per ton.
Belfast, Ireland, built, iron ships..... 46 per ton.
Belfast, Ireland, built, steel ships..... 53 per ton.

A dozen years ago there was a difference of $10 per ton on the cost of wooden and metallic vessels, in favor of the former. The result of this cheapening of iron and steel has been that Howard D. Troop, who owns a fleet of no less than forty sailing vessels in this city, has, during the last eighteen months, given his order to Scotch shipbuilders for iron vessels at $46 per ton, in preference to buying wooden ships at home for $45 per ton. He has just sent an order to A. McMillan & Son, of Dunbarton, Scotland, for a 1,500-ton iron ship.

Although the lower provinces are fast losing hold of their favorite industry, yet they have not entirely given up the fight. W. Law & Co., of Yarmouth, Nova Scotia, are now constructing a four masted, spruce ship of 2,650 tons net register, which will be the largest sailing vessel ever built in North America, and the third four-masted ship. (The Great Republic, of New York was the first, the 2,400-ton Ocean King, of Boston, built by J. Henry Sears, the second.) This new Nova Scotia ship will be one hundred tons larger than the hard wood ship now building by Carleton, Norwood & Co., of Rockport, Mass. It is likely that the few wooden vessels which are still to be built will be four-masted ships of from 2,200 to 3,000 tons register, as they will be the most profitable for long voyages. Their great carrying capacity and small expense, compared with steamers, give them the advantage over the latter vessels. The four-masted iron ship, of 3,000 tons net register, which was launched from the Clyde last summer, took a cargo of 4,700 tons of salt from Liverpool to Calcutta, and it is probable that she will take even a greater weight of grain from San Francisco to Great Britain. Her builders believe that she is capable of carrying 5,000 tons of dead weight, but that is more than safety would allow. Had it not been for the cheapening of the manufacture of iron for ships' plates, this port would still be flourishing as a shipbuilding centre, but time and modern improvements do not permit of any sentiment in regard to patronizing home trade. Although St. Johns possesses one of the finest harbors in the world, open all the winter, and with water enough to float a 5,000-ton steamer all the year round, yet its commerce is steadily decreasing. Steamers now almost monopolize the deal carrying trade to the British Islands, a trade which, until 1878, belonged exclusively to sailing vessels, and when it is taken into consideration that the carrying capabilities of a steamer are three times that of a wind jammer, it will be seen that a few

steamers (comparatively speaking) can do the work of a large fleet of barks, brigs and schooners. St. Johns, herselt, is the fourth tonnage-owning port in the British Empire, and her vessels are to be seen all over the seas, but she has no steamer, and it will only be a short time when the British tramp steamers will run her sail vessels off the face of the water.

By way of a postscript to the above I will add something which may not be very well known in regard to the tide wave phenomenon here to be seen. This tide wave that sweeps to the northeast along the Atlantic coast of the United States, entering the funnel like mouth of the Bay of Fundy, becomes compressed and elevated as the sides of the bay gradually approach each other. In the narrower parts, the water runs at the rate of six knots an hour, and the vertical rise of the tide amounts to sixty feet in height. At some points these tides, to an unaccustomed spectator, have rather the aspect of some rare convulsion of nature than of an ordinary daily occurrence. At low tide wide flats of brown mud are seen to extend for miles, as if the sea had altogether retired from its bed, and the distant channel appears as a mere strip of muddy water. At the commencment of the flood a slight ripple is sure to break over the edge of the flats. It makes swiftly forward, and covering the lower flats almost instantaneously, gains rapidly on the higher swells of mud, which appear as if they were being dissolved in turbid water. At the same time a torrent of red water enters all the channels, creeks and estuaries, surging, whirling and foaming, and often having in its front a white, breaking wave, or "bore," which runs steadily forward, meeting and swallowing up the remains of the ebb, still trickling down the channel. The mud flats are soon covered, and then, as the stranger sees the water gaining with noisless and steady rapidity on the steep sides of banks and cliffs, a sense of insecurity creeps over him, as if no limit could be set to the advancing deluge. In a little time, however, he sees that the flat, "Hitherto shalt thou come, but no further," has been issued to the great bay tide, its retreat commences and the waters rush back as quickly as they entored. So much for the great "bore" of St. Johns.

G. FOSTER HOWELL.

General Hazen, Chief of the Signal Service, objects to the suggested transfer of that service from the military to a civil branch of the Government. He claims that its military organization is necessary to make it effective. General Hazen is correct in this. Before any transfer of this useful branch of the military service to a civil branch of the Government is undertaken, something more should be heard from those who advocate the change. This transfer idea was spoken of last year at the Vienna Polar Conference, where the chiefs of the Meteorological Services of Great Britain, France, Russia, and other countries assembled. It was generally acknowledged that the present organization of the United States signal service was superior to that of any other nation. Professor Mascart, chief of the French Bureau, and Professor Wild, of St. Petersburg, especially expressed their great admiration for our weather service and expressed themselves strongly because they were unable to accomplish a like work from the fact that they lacked a military organization.—*Maritime Register.*

A notable event in the boiler trade of Cleveland was witnessed last Saturday, being the shipment by the Variety Iron Works, of eight large tubular boilers 65"x18' with 54 tubes and with Butman furnaces attached, to the great Washburn mills, Minneapolis, Minn. The long freight train which conveyed the consignment was decorated with flags. The amount of the invoice was upwards of $42,000, and the entire work has been done by the Variety Works since the great lumber fire of last summer which swept their works out of existence. In rebuilding the Variety Co. have made their works one-third larger and have added to their own industries those formerly carried on by Butman Furnace Co. and the manufacture of railroad frogs and crossings, formerly the business of the Novelty Iron Works.—*Trade Review.*

For Sale or Exchange,

Tug Annie Robertson.

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Commencing Sunday, May 11, 1884, at 12 o'clock noon the time given in the figures below is the new standard (Ninetieth meridian) time, which is thirty-three minutes slower than Cleveland time proper.

Eastward.	Arrive	Depart.
No 4, Fast Limited Express	*1 10 A M	*1 25 A M
No 8, N Y, B & A Express	*6 35 A M	*7 00 A M
No 26, Elyria Accommodation	†8 05 A M	
No 35, Buffalo Ac'm via Sandusky	†10 35 A M	†10 50 A M
No 35, Toledo Accom via Norwalk	†10 35 A M	†10 50 A M
No 12, N Y & B Fast Express	*1 55 P M	*2 25 P M
No 14, Special N Y & Bos Expres		5 00 P M
No 2, Night Ex via Norwalk	9 40 P M	†10 00 P M
No 22, Night Ex via Sandusky	†9 42 P M	
No 26, Conneaut Accommodation	†4 25 P M	

Westward.	Arrive.	Depart.
No 1, East Limited Express	*11 55 A M	*12 05 A M
No 23, Mich Express via Sandusky	*2 15 A M	*2 35 A M
No 3, Chicago Express via "	†6 05 A M	6 30 A M
No 25, Mich Accom Norwalk		†6 10 A M
No 21, Toledo Ex via Norwalk	†12 50 P M	†3 20 P M
No 5, St Louis Ex via Sandusky	†12 05 P M	12 50 P M
No 9, Chi Pac Ex via Norwalk	*6 10 P M	*6 40 P M
No 31, Elyria ac to Elyria only		†4 30 P M
No 27, Conneaut Accommodation	†8 10 A M	

Sunday train for Nottingham—Depart 8:30 a. m. and 1:45 p. m.; returning, leave Nottingham at 9:05 a. m. and 3:45 p. m.

Reference marks—* Daily, † daily, except Sunday, ‡ daily, except Monday.

For full information as to trains and connections apply at the new city ticket office, corner Seneca and St. Clair streets, Lake Shore block.

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Following is the time in effect Oct. 6, 1884, and until further notice:

GOING EAST.	LV.	AR	GOING WEST.
			P M.
.....	Chicago	7 40	.....
.....	Valparaiso	5 42	.....
	P. M.		
.....	Fort Wayne	1 50	.....
.....	New Haven	1 35	.....
			A. M.
.....	Leipsic	11 30	.....
.....	Arcadia	10 34	.....
A. M.			P. M
6 50	Fostoria	10 22	8 59
7 35	Green Springs	9 44	8 05
8 15	Bellevue	9 10	7 35
10 49	AR. Cleveland Lv	6 45	5 01
P M.			
12 05	Painesville	.....	3 44
12 58	Ashtabula	.....	2 51
1 42	Conneaut	.....	2 20
2 41	Erie	.....	1 23
			A. M.
4 19	Dunkirk	.....	11 24
			A. M.
5 55	AR. Buffalo Lv.	.....	9 50

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For information, call on nearest agent of the Company, or address

B. F. HORNER,
Gen'l Passenger Agent,

LEWIS WILLIAMS,
General Manager. Cleveland, O.

BEE LINE

CLEVELAND, COLUMBUS, CINCINNATI & INDIANAPOLIS.

Commencing Sunday, November 23, 1884, trains of the Bee Line—Cleveland, Columbus, Cincinnati & Indianapolis Railway—will leave and arrive at Cleveland as follows, CENTRAL STANDARD TIME, 33 minutes slower than Cleveland time:

	Depart
No. 3, Columbus, Cincinnati & Ind Ex	9:00 A M
No. 23, Galion & Wheeling Express	6:50 A M
No. 9, Col., Cin., Ind & St. Louis Ex	*6:50 P M
No. 5, Col. Cin., Ind. & St. Louis Express	*12 25 P M
No. 27, Galion & C.L & W. Acc	3:30 P M
No. 29, Massillon & Ulrichsville Ex	4.30 P M
	Arrive.
No. 8, Col, Cin, Ind. & St. Louis Exp	*6:40 A M
No. 20, Uhricsville & Massillon Ex	8:55 A M
No. 2, Col. Cin. & Indianapolis Express	9:50 P M
No, 14, St, Louis, Ind.. Cin. & Col. Ex	*4:45 P M
No. 22, Galion Acc	9:20 A M
No, 26, Wheeling Accom	4:15 P M
No. 4, Col., Cin & N. Y. Express	1:15 A M

Trains marked * daily, all other trains daily except Sunday

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O. B. SKINNER, Traffic Manager.
A. J. SMITH, General Passenger Agent.
CLEVELAND, OHIO.

New York, Pennsylvania & Ohio R. R.

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Central or Ninetieth Meridien time, 33 minutes slower than Cleveland city time.

Until further notice trains will leave from the new Central Depot, South Water street and Viaduct as follows:

7.20 a. m. ATLANTIC EXPRESS—(Daily) Pullman sleeping and hotel coaches from Leavittsburgh 9:10 a. m. to New York, Albany and Boston without change. Arrive at Meadville at 11:25 a. m. (dinner) Franklin at 12:08 p. m, Oil City 12:30 p. m, Corry 1.14 p. m, Jamestown (Lake Chautauqua) 2.12 p. m, Buffalo 5:50 p. m. Rochester 8:20 p. m.; Hornellsville 6:00 p. m. [supper]; Corning 7:25 p. m. Elmira 8:05 p. m. Binghanton 10:05 p. m., Albany 5:00 a. m. Boston 2:05 p. m.; arriving at New York 6:15 a.m.

7:20 a. m. PITTSBURGH EXPRESS — Daily — Through without change. Arrives at Youngstown 9.55 a. m., Sharon 10:55 a. m., Sharpsville 11:05 a. m., Pittsburgh 12 45 p m.

2:30 p. m. LIMITED EXPRESS—Through Pullman sleeping coach from Cleveland to New York. Arrives at Meadville at 6:30 p. m, Jamestown 8:47. p. m., Salamanca 9:45 p. m., New York 10:25 a. m.

2:30 p. m. PITTSBURGH, WASHINGTON AND BALTIMORE EXPRESS—Daily—Thro without change. Arrives at Youngstown 5:00 p. m., Pittsburg 8:00p. m., Washington 7:09 a. m., Baltimore at 8:19 a. m.

4:00 p. m. MAHONING AOMMODATION — Stopping at all way stations, arriving at Youngstown 6:55 p. m., Sharon 7:50 p. m., Sharpsville 8:00 p. m. Daily except Sunday.

11:00 p. m. NIGHT EXPRESS—(Daily except Sunday) Seeping coach from Cleveland to Hornellsville. Arrive at Meadville 3:25 a. m., Corry 4:59 a. m. Jamestown 5,57 a m, Salamanca at 7.10 a. m., Buffalo 9:20 a. m., Niagara Falls 11.50 a m., Rochester 12:58 p. m., Hornellsville, 11:00 a m., Corning 12:07 p. m, Elmira 12:40 p. m., Binghampton 2:19 p m., New York 9:10 p. m.

11 00 p. m. PITTSBURGH, WASHINGTON AND BALTIMORE EXPRESS — Wagner Sleeping Coach, Cleveland to Pittsburg without change Arrive at Youngstown at 2:00 a. m., Pittsburgh 5:55 a. m., Washington at 7.30 p m, Baltimore at 8 30 p m.

Trains arrive at Cleveland. 6:20 a. m., 10:08 p. m., 12:50 p. m., and 6.15 p. m.

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A. A. POMEROY, Editor and Proprietor.

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CLEVELAND, OHIO, THURSDAY, JANUARY 1.

COMPLIMENTS OF THE SEASON.

The MARINE RECORD, with the present number enters upon the Seventh volume, and we venture to say that the course it has taking during the year just closed has been a benefit to the interests for which we print and a pleasure to our readers and assures us of much prestige for the paper in the years to come. Although we have had what is called a dull season to work through, that of '84, we have been met with encouragement and good words from every quarter, from Ogdensburg to Duluth, some of which we will quote hereafter, and, as is customary with technical papers on the event of a new volume, we take this occasion to thank our subscribers and advertisers for the liberal patronage and courtesy for the year just closed, as well as for the many words of praise and good will that our efforts to make a good and entertaining as well as instructive paper have prompted. We have striven to keep before our readers the proper thing to do in emergencies, by the publication of all new orders from the department of navigation and all marine law decisions that have a general application or tendency to point out to the master of a vessel, the sailor, the shipper or vessel owner, any important technical points that in their entirety, may have escaped their attention. We have succeeded in a flattering measure in calling the attention of the officials of the United States and of Canada to the crude condition of certain vital points in our grand system of lake navigation and have a warm feeling for our daily contemporaries who have assisted, at our suggestion, in remedying the evils which abound, whether they have duly and truly given us the proper credit or not; and we now take occasion to thank all journals interested for their kindly notices of our progress and enterprise, of which the columns of the MARINE RECORD during the year just closed bear witness.

THE agitation of the silver question is having a depressing effect in all financial circles, and the banks are becoming somewhat alarmed at the threatened decline in the prices of silver, and consequently, of the value of the silver certificates. The banks in Washington hold to-day enomous amounts of silver certificates, upon which it is feared they can scarcely realize full value, unless a measure passes Congress for relief, in the shape of the withdrawal of the one and two dollar notes from circulation and the suspension of the coinage of the silver dollar. The people are only interested in a convenient and stable currency, consequently the banks will win, and something similar to Buckner's bill will become a law before the adjournment of this session. Yet, the bankers are greatly concerned lest this relief shall not be promptly forthcoming and the state of suspense is annoying. The fact that a silver dollar is worth in the markets to-day only 85 cents in gold would seem to point to the urgency of some legalization in the premises. Buckner's bill will come before the committee on weights and measures on January 7th, and the committee is hostile toward it.

THE tobacco and sugar manufacturers are raising a great howl against the Spanish Treaty, and remonstrances are pouring into the Senate every day. Labor organizations and trades unions are also making a combined effort in antagonizing the treaty.

AMERICAN HUMANE SOCIETY.

Dr. William F. Thoms, the president of the American Humane Society, will give a reception on New Years Day to all the life savers and navigators in the port of New York at the Nautical school, 92 Madison street. The alumni of the school will be present. Dr. Thoms is well known in Cleveland, having established humane societies in all parts of the world.

HARBOR IMPROVEMENTS.

Special to the Marine Record.

KENOSHA HARBOR.

On the improvements of Kenosha harbor Assistant Engineer Harding states that it is proposed to rebuild the superstructure over 355 linear feet of the south pier now in a dilapidated condition, and to make such minor repairs to piers as are needed. The funds asked for the fiscal year ending June 30, 1886, are to be used in rebuilding the superstructure over 415 linear feet of the inner section of the south piers and in maintaining the present channel or entrance. The amount required for completion of existing project is $51,000, and the amount that can be profitably expended in fiscal year ending June 30, 1886, is $20,000. During last season a double row of sheet-piles was driven along the south face of a section of the south pier, 170 running feet in length near its western extremity, covering the intersection of the shore line to the southward of the channel, which has effectually checked the passage of sand through the piers.

A severe storm, which occurred July, 1883, had the effect of causing a settling of the pier to an average depth of 10½ feet below the plankdecking of the crib. To supply the deficiency thus caused, 20 cords of stone were put into the crib and placed around the end of the pier as a riprap.

The north wall of the north pier was raised one foot in height for a distance of 162 running feet covering the intersection of the shore line with the first. Repairs were made to the south face of that pier where the timbers were broken.

A plat of the soundings taken at this harbor on the 25th of April last shows that at the present stage of water vessels drawing not more than 12½ feet of water can enter the harbor. The present stage is about 1½ feet above datum. The superstructure of the outer section of the south pier, which is 355 feet in length and 20 feet in width is in a very dilapidated condition, and should be renewed as soon as possible. The cost of cutting down and rebuilding this section to a height of 5 feet above datum is estimated at $4,331. The inner section of this pier, which is 415 feet in length, will require renewing within the next three years. E.

[*Continued from 1st Page*]

sustained late in the season at Manitoulin requiring the services of a few men to go along with the work. By the way, the damages to this craft seem to be a blank in the reports thus far seen, and why? Bah! I would like just here to put in another kind of an expression I am familiar with, but I will forbear. She was reported ashore. It was nothing of the kind. She was simply stranded, and a bad strand it was. Notwithstanding this vessels' repairs are not completed, the whole outcome of her misfortune can be figured up to within $25, which is sufficient for all practical purposes. But how is a pencil-shover not a mariner to get at these estimates for himself; he can not tell you the difference between a weather earing and a main sheet. He reads the account of the disaster in some exchange and makes the best calculation he can, but does not get within a squirrel's jump of being correct. Let such a man as Captain Bradley, or any other marine expert, read the same item and he will come within $10 of a correct estimate. But allow me to trespass a little farther. Can the party who two months ago gave a splurge of marine disasters give on the first of January, 1885, the number and losses of 1884. I opine not, for the game is never out until it is played out. And for this reason I maintain none of these exhibits should be given to the public until the season has expired, and then not until ten days thereafter. Those who are interested in such matters can afford to wait, and by giving it in different issues, it affords good winter reading.

At Wyandotte, where last season at this time there was unusual activity in shipbuilding, all is now as dead as a door nail; Sunday all the while. It is safe to infer that aside from what railroad lines may do in the building of new boats between now and the opening of navigation, the other chaps will handle the subject rather tenderly. Yet, strange as it may appear, I met a man the other day, and he was the same old fellow I have come in contact with for many past years, who assured me that next season would be a big one, freights way up, and what is more, "Cleveland" is going to boss this business for the next four years, and don't you forget it.

The tug Bob Hackett was sold at admiralty sale at Windsor, Saturday, to Sam Stover for $1,300, in addition to which a heavy mortgage has to be lifted.

A tug with a diver and wrecking apparatus was sent from here on Saturday to raise the steamer Massasauga which was sunk by ice on Thursday last.

Captain George E. Mapes, who is the owner of the schooner Ferret, laid up at this port will during the winter place her in through repair for next season and being not only a navigator but a shipwright will superintend the work himself, to while away the winter months. The cold snap came to a sudden close on Saturday evening and the weather together with the Detroit river is as open as in mid summer. J. W. H.

THE DEATH ROLL.

There appears from the record of 1884, from various causes, the passing away of those engaged in our lake marine, a total of eighty-eight, and from natural causes, forty-five, which includes those closely identified with marine interests as well as others retired from a lake-faring life. The memoranda will be found useful for future references:

DIED FROM NATURAL CAUSES.

Jan. 1—Captain George R. Hand, of paralysis, at Buffalo, aged 68.

Jan. 6—Captain W. G. Marshall, at Grindstone Island, Lake Ontario, aged 84.

Jan. 8—Captain Lester Pavy, an old Oswego mariner, at Milwaukee, aged 72. John Porter, seaman, perished on the shore of Lake Superior.

Jan. 25—George C. Freeman, watchman, suddenly, on board the propeller Arabia, at Buffalo.

Feb. 1—Captain James Pentoney, of heart disease, at Chicago.

Feb. 18—Captain Isaac May, after a brief illness, at London, Ontario, aged 63.

March 1—Captain John Navaugh, at Toledo, aged 39.

March 10—Captain Webquish, an Indian pilot, at Cleveland.

March 12—George Richards, seaman, at East Tawas.

March 16—Captain John H. Foley, a retired mariner at Chicago, aged 38.

March 18—Captain Gus Griffin, after a short illness, at Buffalo. Captain John Galloway, at Toledo, aged 58.

March 21—Wm. Thompson, marine engineer, at Cleveland.

March 25—Captain Geo. W. Fossett, of paralysis, at St. Joseph, aged 52.

March 31—Captain Geo. B. Dickson, retired, after three days illness, at Buffalo, aged 53.

April 2—John Gore, a Lake Superior pilot, in hospital at Detroit, aged 45.

April 4—Wm. C. Perry, marine engineer, at Detroit, aged 51.

April 15—Captain Edward McGeehan, at Ann Arbor, Michigan.

April 25—Wm. Moses, chief engineer of Anchor Line steamers, Buffalo, at Thomasville, Ga., aged 54.

April 28—R. L. Montgomery, retired, of consumption, at Detroit, aged 59.

May 6—Captain A. J. Raynor, at Cleveland, Ohio.

May 26—Captain Geo. Butlin, retired, at China, river St. Clair, aged 62.

June 17—Captain Wm. Waite, a retired veteran, at Chicago, aged 70.

June 18—Captain John Kemp, retired veteran, Toronto, Ont., aged 82.

July 6—Harvey Stephens, shipbuilder, at Cleveland, aged 65.

July 22—Mike Slattery, seaman, in the hospital at Chicago.

July 31—Captain Wm. Drewry, from exposure, at Buffalo, aged 67.

Aug. 4—Captain Stowell Andrews, of consumption, at Port Huron. Captain H. N. Throop, a very popular steamboat master in early days on Lake Ontario, at Pultneyville, Lake Ontario, aged 87.

Aug. 5—James O'Neil, seaman, in the hospital at Chicago.

Aug. 11—Captain Arthur Atkins, retired, at Chicago, aged 55.

Aug. 19—Captain Stephen Lampoh, suddenly, on board the steamer H. Chisholm, at Cleveland, aged 52.

Aug. 25—Captain Louis Bogart, suddenly of appoplexy, on board the steamer R. A. Packer, at Buffalo, aged 45.

Sept. 27—Captain T. W. Steel, many years retired, at Chicago, aged 62.

Oct. 7—Captain Marshall Capron, retired, at Conneaut, O., aged 68.

Oct. 10—Captain Wm. T. Richards, at Milwaukee.

Oct. 12—Captain W. L. Spencer, of hemorrhage, at Chicago.

Oct. 16—Captain Ward Plum, at Ogdensburg, N. Y.

Oct. 17—Captain James Dunlap, found dead, at Erie, Pa., aged 80. Wm. E. Lane, seaman, in the hospital at Chicago.

Oct. 29—Captain J. A. Burrows, of the propeller St. Magnus, suddenly, at Sault St. Marie.

Nov. 8—Captain Ambrose N. Wilson, of dropsy, at Chicago.

Nov. 28—Captain John M. Turner, retired veteran, at Chicago, aged 77.

Dec. 8—Captain Chas. W. Nichols, at Detroit, aged 68.

ACCIDENTAL DEATHS.

April 2—Thomas McGrath, steward, drowned from the steamer C. H. Starke, in Lake Michigan, aged 20.

April 7—Captain George Smith, Engineer John Perew, and J. Rancour, fireman, killed by the explosion of the tug Peter Smith, on Lake Erie.

April 14—Wm. Wolf, colored deck hand, drowned from propeller Oconto, at Detroit, aged 30.

April 16—Leonard Ames, first mate, drowned from the steambarge S. P. Heath, at Grand Haven, aged 55.

April 22—John McGuire, seaman, killed by falling into the hold of the steamer Athabasca at Port Colborne, aged 55.

May 2—James Horn, second mate, drowned from the schooner Lizzie A. Law at Buffalo, aged 26.

May 4—Mrs. McDowell and daughter, drowned from a dredge capsizing near Black River, O.

May 15—Robert Livingston, drowned at Alpena, Mich.

May 23—Charles Mooney, John Ford and Thomas McEwan, drowned from a boat opposite Port Huron.

May 26—James Stevens, deckhand, killed by falling into the hold of the steamer W. H. Barnum, at Buffalo, aged 27.

June 17—Captain James Short, of the schooner Bavaria, killed while loading timber at Grand Marias, Lake Superior. George Galley, of the schooner M. C. Bell, drowned at Cleveland. W. H. Ramsdell, purser of propeller Japan, drowned at Sault St. Marie.

June 29—Martin Tyerson, seaman, drowed from the schooner Maine, in Lake Michigan, aged 42.

July 1—Charles Campbell, seaman, killed by a fall from aloft on the schooner City of the Straits at Chicago.

July 6—Floyd W. Miner, John Strong, John Speckman and Robert Gibson, drowned from a boat at St. Ignace. Nicholas Eubelder, drowned from a barge at Point Abino.

July 16—Paul Becki, seaman, drowned from the schooner Adventure, off Sand Beach, Lake Huron.

July 18—Lawrence Thompson, Robert Wing and Joseph Emmel, fatally burned on board the scow Thatcher, at Toledo.

July 21—Thomas Lynhurst, seaman, killed by a fall from aloft on board schooner A. E. Vickery, on Lake Huron. Robert King, seaman, drowned from the schooner Nellie Cuthbert, in Lake Huron.

July 28—Frank Clark and Wm. Clingman, drowned from steamer Pearl at Put-in-Bay. Daniel Moore, deckhand, and O'Connor, fireman, drowned from steamer Alberta collision with the Osborne, Lake Superior. Philip Snowman, deckhand, drowned from propeller Champlain in Lake Michigan, aged 26.

July 31—Peter Bloom, deckhand, killed by falling into the hold of the steamer Leland at Escanaba, aged 25.

Aug. 4—Thomas Larsons, seaman, drowned from the schooner Mocking Bird, in Lake Huron.

Aug. 5—Annie Lee, drowned from a yacht in Lake Huron.

Aug. 17—Wm. Minton, cook, drowned from schooner C. Harrison at Whitehall, Lake Michigan.

Aug. 20—Frank Duchow, engineer, killed by the Explosion of the tug Pacific at Ashland, Lake Superior. James Gallaghan, seaman, fatally injured on a railroad track at Chicago. George Puddefoot, drowned from a steamer at St. Ignace.

Aug. 29—James Creighton, seaman, drowned from the schoonet Annie Foster in Georgian Bay,

Sept. 4—Mark Roberts, of the steamer C. J. Waite, drowned at Toledo, aged 22. John Greene, of the steamer St. Lawrence, drowned in Lake Ontario, aged 28. Daniel

McGilvray, drowned from tug Paige, Lake Superior.

Sept. 9—Louis Granger, seaman, drowned from the schooner Iron Cliff, at Wyandotte, aged 24.

Sept. 17—Myron Enos, seaman, drowned from schooner F. L. Wells, in Lake Ontario.

Sept. 18—John Cartura, deckhand, drowned from the propeller James Fiske, at Buffalo.

Sept. 23—Andrew Wilson, seaman, drowned from the schooner Two Fannies, in the Straits of Mackinaw.

Sept. 25—Captain Plant and Alex Ried, lost with the schooner Golden Rule in Lake Superior.

Sept. 28—Fred Gilbert, mate, drowned from the schooner Montcalm, at Springwells, Detroit river. John Gobin, watchman, drowned from the propeller Passaic, in Lake Erie.

Sept. 30—Henry Heldman, steward, drowned from the propeller Sanford, at Frankfort, Lake Michigan, aged 30. Henry Smith, seaman, killed by a fall from aloft on board the schooner Tabor, at Chicago. Four men drowned from a boat in the Welland canal, names not given. Four men drowned from a boat at Michigan City, names unknown.

Oct. 7—Hugh Cascadolen, mate, drowned from the steambarge Agnes, in Lake Huron.

Oct. 9—Captain Dan Davis, J. Cook, Warren Cook and Fred Haightly, lost with the schooner Kitty Grant, in Lake Michigan.

Oct. 13—Captain Charles Storm drowned from the schooner Thomas Howland, at Chicago.

Oct. 15—Hugh Murray, seaman, killed by falling into the hold of the schooner Northwest, at Milwaukee.

Oct. 21—Christ Olsen, seaman, drowned from the schooner W. H. Chapman, at Milwaukee. F. Gillen, seaman, fatally injured on board the schooner C. Marshall, on Lake Michigan.

Oct. 22—James Brown, seaman, drowned from the schooner James Mowatt, at Collingwood.

Oct. 23—Adam Cook, watchman, drowned from the propeller Alma Munro, in Lake Erie, aged 28.

Nov. 1—George Bush, seaman, drowned from the sloop Laura, in Lake Ontario.

Nov. 7—Hiram Ryckman, drowned from the schooner Fellowcraft, in Lake Erie.

Nov. 10—Captain Wm. S. McKay, killed by falling from aloft on board the schooner Garribaldi at Goderich. John Green, drowned from the steambarge F. McBrier at Bay City.

Nov. 14—Charles Mack, seaman, drowned from the schooner Unadilla, in Lake Huron.

Nov. 17—Wm. Clark and John Clifford, drowned from the scow Frank Morris in Lake Huron.

Nov. 23—James McGuire, seaman, fatally injured on board the schooner Ida Keith, on Lake Erie. Michael Heatherman, seaman, drowned at Chicago.

Dec. 3—Henry Carroll, watchman, drowned from the steamer Southern Belle, at Toronto, aged 59.

Dec. 17—Captain Robert L. Byers, found drowned at Black Rock, near Buffalo, (supposed suicide.)

Dec. 26—Henry Berres, marine engineer, accidentally shot on board the propeller Lawrence, at Glen Haven, Lake Michigan.

In addition to the foregoing the following committed suicide:

March 28—Captain Thomas McCort, by hanging, at Fremansville, Ohio, age 37.

June 15—Captain John J. Downs, by drowning, at Toledo, aged 56.

June 24—Mrs. Clark, of the schooner G. M. Neelon, by jumping overboard near Rond Eau, Lake Erie.

July 1—Casper Charlton, marine engineer, by jumping into the Cuyahoga, at Cleveland.

July 19—John Willis, from the steamer United Empire into Lake George, aged 65.

Aug. 19—John Muethel, from the steamer Garland in Detroit river.

Aug. 31—John Templar, lookout from the propeller Buffalo, in the Staits.

Sept. 4—O. W. Wilson, from the steamer Sheboygan, Lake Michigan.

Sept. 14—Fred A. Gilbert, mate, from the steambarge W. L. Wetmore, at Bailey's Harbor, aged 52.

The following may be recorded as having been killed:

June 30—John Johnson, shot during a seaman's riot at Ashtabula.

July 20—Alex Atwell, mate of the steamer Annie Laurie, stabbed in a saloon fracas at Chicago. Charles Rielly, fireman, stabbed at the same time.

From accidental causes	88
From natural causes	45
From suicide	9
From foul play or murder	3
Total	145

Year.	Nat'ral causes.	accidents	Total.
1883	37	202	239
1882	84	208	292
1881	30	92	122
1880	48	455	503
1879	41	167	208
1878	30	124	154
1877	33	181	214
1876	19	158	177

WRECK REPORT—RECAPITULATION.

TONNAGE PASSED OUT.

We have included in our schedule of vessels retired from service the names of several which now lie stranded, or ashore, with dim prospects of future recovery, showing a decrease from last year of thirty-six:

Side-wheel Steamers, Propellers and Steambarges.

Name.	Cause.	Where Lost.	Tonnage.	Age.	Value.
Prince Edward	Burned	Lake Ontario	112	16	$15,000
Scotia	Wrecked	Lake Superior	1502	15	80,000
Europe	Burned	St. Catherines	300	14	22,000
J. Seaverns	Wrecked	Lake Superior	178	4	12,500
J. M. Osborne	Sunk by collision	Lake Superior	646	2	50,000
Morley	Wrecked	Lake Superior	869	5	40,000
Owen Sound	Wrecked	Lake Superior	550	9	25,000
Victoria	Wrecked	Lake Huron	192	12	3,000
Fortune	Wrecked	Lake Erie	199	5	5,000
Tugs.					
C. Williams	Burned	Lake Michigan	36	13	8,500
Louis Dole	Condemned	At Chicago	28	18	3,000
A. Sumner	Burned	At Oswego	207	12	20,000
Peter Smith	Exploded	Lake Erie	23	12	5,000
Relief	Burned	Lake Erie	267	29	12,000
Noah P. Sprague	Sunk by leak	Lake Erie	173	27	10,000
Sherwood	Burned	Lake Ontario	46	10	8,000
Jerome	Burned	In Bear Creek	19	15	2,500
J. W. Cramer	Wrecked	Near Buffalo	23	10	3,500
Phœnix	Burned	At Malden	137	16	10,000
Schooners and Barges.					
Alexander	Condemned	At Chicago	450	17	2,000
L. B. Crocker	Wrecked	Lake Erie	238	31	5,000
J. W. Brown	Condemned	At Chicago	165	37	1,000
E. A. Mayes	Sunk	Lake Superior	429	13	10,000
Hope	Sunk	Lake Ontario	259	15	8,000
Ahnapee	Wrecked	Lake Michigan	118	17	2,000
N. P. Downie	Sunk	Lake Ontario	165	11	5,000
Babineau & Gaudry	Condemned	At Detroit	150	18	500
W. W. Brigham	Wrecked	Lake Michigan	54	36	1,000
J. Bigler	Sunk	Lake Superior	351	18	10,000
Alaska	Wrecked	Lake Michigan	316	21	6,000
C. J. Wells	Wrecked	Whisky Island	549	18	14,000
Mary Battle	Wrecked	Lake Superior	315	12	10,000
Three Bells	Wrecked	Lake Michigan	197	30	2,000
Harry Bissell	Wrecked	Lake Superior	496	18	10,000
Arabia	Wrecked	Georgian Bay	342	36	5,000
King Sisters	Wrecked	Lake Erie	286	26	8,000
Louisa	Wrecked	Lake Michigan	192	16	3,500
C. Nilsson	Wrecked	Bailey's Harbor	315	13	16,000
Golden West	Wrecked	Georgian Bay	456	23	12,000
Shandon	Wrecked	Georgian Bay	400	10	5,000
New Dominion	Foundered	Lake Erie	250	17	5,000
Jura	Wrecked	Lake Erie	96	19	5,000
Lady Dufferin	Wrecked	Lake Superior	315	12	10,000
Starling	Wrecked	Georgian Bay	248	11	6,000
Total			12,650		$497,000

CLASSIFICATIONS AND COMPARISONS.

The table hereunto annexed gives the losses on hulls and cargoes based on the actual valuation and not insurance estimates, showing the losses on hulls to be $1,322,300, and cargoes, $354,000, and the total number of disasters 884. No sums, in our estimates, below $100 have been taken note of. The number of casualties this season shows a decrease from last year of 34, and the number each month with total losses on hull and cargo to be as follows:

Month.	No. of accidents.	Damages.
January	3	$1,600
February	4	5,500
March	2	600
April	35	71,500
May	122	71,400
June	90	154,600
July	98	168,500
August	114	237,000
September	128	196,500
October	180	391,500
November	102	346,700
December	6	30,800
Total	884	$1,676,300

The comparison with past years is as follows:

Year.	No.	Losses.
1883	918	$2,840,343
1882	899	1,478,300
1881	1,052	2,019,900
1880	960	1,678,900
1879	804	1,120,400
1878	604	840,000
1877	746	1,460,700
1876	639	1,173,200
1875	1,056	3,791,300
1884	884	1,676,300

The losses of 1884 are attributed to the following causes on each lake:

LAKE ONTARIO.

Causes.	No.	Losses.
Heavy weather	13	$19,000
Collisions	6	10,800
Sprung aleak	4	12,000
Fire	5	40,700
Stranded	13	38,500
Disabled	4	5,100
Exploded	1	500
Ashore	5	7,800
Total	51	$134,400

LAKE ERIE AND WELLAND CANAL.

Heavy weather	45	$31,000
Collisions	39	35,500
Fire	10	65,200
Stranded	24	34,300
Explosions	2	6,000
Disabled	40	37,700
Ashore	10	22,000
Foundered	1	3,500
Sprung aleak	16	30,900
Total	187	$266,100

DETROIT RIVER.

Heavy Weather	1	$100
Collisions	8	2,400
Stranded	29	16,600
Disabled	16	6,900
Sprung aleak	3	1,200
Fire	4	20,500
Total	61	$47,700

LAKE ST. CLAIR.

Heavy weather	3	$2,800
Collisions	5	1,600
Disabled	5	1,700
Stranded	14	7,100
Sprung aleak	2	1,300
Total	29	$14,500

RIVER ST. CLAIR.

Heavy weather	1	$500
Collisions	7	3,300
Stranded	12	5,300
Disabled	9	4,300
Fire	3	15,500
Total	32	$28,900

LAKE HURON AND SAGINAW RIVER.

Collisions	8	$4,400
Fire	2	500
Stranded	6	86,200
Disabled	32	27,400
Ashore	9	21,000
Sprung aleak	6	9,800
Heavy weather	23	24,600
Total	86	$173,900

GEORGIAN BAY.

Stranded	9	$86,600
Fire	1	1,500
Ashore	3	1,700
Heavy weather	23	24,600
Total	36	$41,300

LAKE SUPERIOR AND SAULT RIVER.

Heavy weather	8	$15,000
Collisions	12	84,500
Stranded	24	50,500
Disabled	8	10,600
Ashore	7	66,500
Sprung aleak	7	19,000
Exploded	1	4,000
Total	67	$250,100

LAKE MICHIGAN AND MACKINAW STRAITS.

Heavy Weather	77	$57,800
Collisions	107	47,200
Fire	14	44,700
Stranded	39	93,500
Exploded	1	100
Disabled	54	50,700
Ashore	31	40,000
Sprung aleak	34	25,400
Total	357	$365,400

COMPARISONS.

Year.	No. lost.	Tonnage.	Valuation.
1875	85	27,177	$1,049,000
1876	38	9,990	307,000
1877	77	20,312	672,100

	Lost.	Tonnage.	Valuat'n
1878	55	13,986	384,000
1879	78	18,531	316,067
1880	68	23,733	796,000
1881	48	13,984	660,800
1882	54	14,923	576,600
1883	90	24,912	947,400

NEW TONNAGE.

Steamers.

Name.	Where Built.	Tons.	Value.
David Wallace	Cleveland	1024	$150,000
George Spencer	Cleveland	1180	100,000
Sir L. Tilley	St. Catherines	679	50,000
Calumet	Buffalo	1180	105,000
Wm. Chisholm	Cleveland	1200	150,000
Albany	Wyandotte	1677	200,000
Syracuse	Wyandotte	1677	200,000
A. B. Taylor	Saugatuck	300	30,000
Kalkaska	St. Clair	1100	100,000
W. A. Haskell	Detroit	1440	150,000
Minnie M	Detroit	295	30,000
W. P. Thew	Lorain, O	90	20,000
Norma	Sandusky	78	75,000
Monteagle	Buffalo	1273	125,000
City of Mt. Clemens	Mt. Clemens	97	15,000
Alberta	Clyde	2000	200,000
Athabaska	Clyde	2000	200,000
Schoolcraft	Wyandotte	595	60,000
Energy	Dresden	50	10,000
P. Sawyer	Green Bay	720	50,000
Rhoda Emily	Trenton	560	50,000
Waldo A. Avery	Bay City	1300	100,000
J. C. Suit	Saugatuck	200	30,000
Gardner	Marine City	800	50,000
Australasia	Bay City	1800	150,000
Joys	Milwaukee	350	40,000
Kasota	Cleveland	1273	125,000
United Lumber-	Deesden	258	50,000
S. H. Pickands	Grand Haven	1200	70,000
Tugs.			
International	Cleveland		$20,000
Record	Cleveland		20,000
C. Williams	Manitowoc		18,000
John Gordon	Saugatuck		10,000
Charles Butler	Frankfort		8,000
D. Robertson	Grand Haven		10,000
C. W. Wells	Marine City		8,000
T. T. Morford	Chicago		25,000
Schooners and Barges.			
Samuel Hall	Manitowoc		$10,000
Minnie Orton	Marine City	600	20,000
Alta	Bay City	909	40,000
George L. Boyce	Manitowoc	308	20,000
James Mowat	Milwaukee	400	30,000
Total		28713	$2811000

AN IMPROVED CAPSTAN FOR WRECKING TUGS.

An invention has recently been made public which will no doubt render the work of pulling off vessels that have gone ashore a much easier task than has all along been the case. It is a patent wrecking capstan for use on revenue cutters and wrecking tugs—geared say 80 to 1 with the full power of the main engines to drive it. The stability of this capstan is said to be such that it will not give way under the greatest amount of strain that it is possible to put upon it. The invention is designed for the purpose of enabling wrecking boats to employ the propeller, capstan and steam engine to great advantage in drawing a stranded vessel off shore. As a whole it consists in the combination of a propeller and the shaft thereof with a capstan and a mechanism applied thereto and to the propeller shaft, whereby, by means of the latter and the motor or engine for revolving it, such capstan and propeller may be simultaneously operated, or one may be operated, independently of the other. While the propeller may be in revolution for the purpose of moving the boat ahead, the capstan may be revolved by means of the attaching mechanism. If, therefore, the boat be supposed to be connected with a stranded vessel by one or more suitable ropes and a cable be properly applied to the capstan, and also to an anchor cast into the water in advance of the boat, the powers of the propeller and the capstan may be simultaneously employed to great advantage in drawing the vessel off shore. This capstan is manufactured by the American Ship Windlass Co., of Providence, Rhode Island.—*Maritime Register.*

In view of the many lake casualties presented to our readers last week, and the recapitulations contained in the current number, together with the complaints which have been expressed from time to time that wrecking appratus is still in the crude state that has obtained for a score or more of years, we respectfully ask the attention of our lake wreckers to the above improvement, that they may consider its merits as an auxiliary to their present apparatus. And we do it without hesitation, knowing that any improvement that emanates from the American Ship Windlass Company is in anticipation of a known want. Ocean and river wrecking tugs have adopted these capstans, the masters of which speak in high terms of their utility. They would also be a great addition to drydocking facilities.

AUXILIARY SAILS.

LOCKPORT, December 29.

To the Editor of the Marine Record:

There is only one best course in a light wind (at least of a speed of ten miles an hour,) that sails, as auxiliary to steam, can aid the steam power, and that is with wind forward of the beam. On all courses abaft the beam with the steam speed faster than that of the wind, the wind can have no effect on the sails, from the fact that the steam power has taken the sails away from the wind. A vessel sailing to windward with the wind forward of the beam, up to an angle of forty-five degrees, the steam speed does not take the sails away from the wind. On the contrary, it increases the power of the wind on the sails, and increases the speed of the vessel, the same as in beating up with the current. There are times with the wind abaft the beam and blowing at a velocity of thirty or forty miles an hour, when the steam power can be dispensed with, that is, if the vessel has spars, rigging, and sails strong enough to meet its force; also if the vessels form is such that her momentum can not be checked by diving into a wave. If all is right the steam, at such times, acts as an auxiliary to the sails, from the fact that the motion it imparts to the vessel enables the sails to be set without splitting. The motion from the steam power decreases the power of the wind on the sails when running before it, or partially so. The sails once set and the speed of the vessel so increased as not to need the steam, if all is then right so that the steam can be shut off, the speed can be kept up without it.

A case in point: The steamer that I built in 1854, with all of her details right for such work, could run at a speed of ten miles an hour by steam alone. She had one large sail only. We had started out in a heavy gale. Before starting we had put on her mast, "preventer braces" and set her sail. The wind was on her quarter, the gale was a severe one and the lake unusually rough. In a short time the engineer came on deck and reported that the speed was so great that it was running the steam all off, and that he could not keep it up. The captain ordered him to throw the wheels out of gear and shut off his steam. He did so, and we ran our course at the rate of eighteen miles an hour with sail only. Levy Rowley, her captain, was an experienced sea captain, and remarked of this passage that there was not a vessel in the world that could have made it in the time that she had, and gave his reasons, as follows: That any other vessel would have rolled and pitched so much that it would have destroyed the efficiency of the sails, and that no other vessel could have used whole sails, as they would have been taken out of the bolt ropes at the first, before she could have gained momentum. We did not use her sail except in high, sharp winds, and this was the only trip we made with her without steam.

As has been said above, the most valuable auxiliary sails will be set on a windward course at an angle of forty-five degrees from the wind. If all is right sails can be set on this course so as to make great speed and use no steam, or rudder, as the vessel can not vary from it. I now have before me an illustration of a vessel in which all is right to set sails so as to hold such a course. In practice with such a vessel, she will steam up to her best speed on that course, with her sails set, then, if her speed has increased so as to be so great that the steam power cannot keep up with it, the steam can be shut off. The vessel I have before me has four independent steam powers, which can be shut off, one at a time, as the exigency at the time may require. To get perfect sailing, not only the hull of the vessel must be right for it, but pure principles of sailing must be taken advantage of. There is a maxim that when the sail has been set right, that in order to get the best speed the position of the sail must not be changed. A rolling, diving motion of a vessel changes the surface of the sails in such a manner as not to be effective. The motion of the hull of a vessel should be as near the motion of an ice boat on smooth ice as possible. The illustration that I now have before me comes as near the ice boat motion as it is possible. It does not roll, nor does it pitch in rough water, and it does not careen. The ice boat runs on an unyielding surface, and its stability depends upon the distance between its runners. The further the runner is from the mast the greater the stability. The reason why the ice boat so instantly moves ahead on the wind is that resistance to sail pressure is positive. There is no least resistance. On the contrary, in a vessel there is a least resistance, and the vessel rolls down until she finds a positive before she moves ahead. This positive is a quantity of buoyancy, and the vessel rolls down until she finds it. The safety ship has her buoyancy so located that there is but the least possible resistance to overcome before she finds a positive to move her ahead. The advantage of this is two-fold. One is, the surface of the sail can not change; the other is that there is no lost motion by rolling to find a positive resistance. As vessels are now formed and rigged, in high wind and rough water, beating to windward, they do not get one-half the speed that the wind would give them if all was right to enable them to do so. In fact, when it blows a gale they can not be sailed to windward, but must lay-to. It is not uncommon for a ship to lay-to two or three weeks at a time. (The ship Ellen Munro, on her passage from Boston to San Francisco, lay-to outside of Cape Cod over three days, and over twenty days off Cape Horn.) Nor can they be sailed in the troughs of the waves. For vessels such as the illustration now before me, clothed with buoyancy, as long as sail can stand they need not lay to. Under motion, with strong sails and sailing on any course, they can carry sail in an excessive high wind, and are steady and at home especially in the troughs of the waves.

The first buoyant-clothed boat that I built was in 1848. She was twenty-four feet long and ten feet wide. Probably no boat ever built won the reputation that boat did. She was the lightest I ever saw of her size. Her performances for the ten years that she was used were most wonderful. I will only give one, as space will not admit of more. The boat was sloop-rigged, and for heavy weather use she had small, strong sails and a small hickory mast with only head stay. The incident was in one of the mid summer hurricanes which sweep everything before it. One of the sail boats, having on board ladies belonging to the South Bay House, had been driven out into the lake before the tempest. I reefed down to the third reef the Experiment (boat's name,) and flew before the storm. The only guide was the wind, so furious was the storm and rain that nothing was visible over a few rods distant. Frenchman's Upper Island was directly to leeward. I thought the boat might be driven on it. I ran the length of it, but they were not there. I then ran around to the lee side of the island and met one of the ablest yachts of the lake, sailed by an able sea captain. He had found the missing yacht, which was also sailed by a sea captain, anchored in a cove under the lee of the island. The question then was for us to get back against the storm. I believed that I could do so. Captain Rowley, who sailed the other boat, was the last one to back out, and we started. When we had rounded the island we were in the direct open surge of the lake, and it was a rough one. The captain's craft rolled and tumbled badly, when we hauled our wind, and made but little headway. The Experiment shot away from her like a dart and was out of sight of her in a few moments. We flew to windward apparently in the "wind's eye." Home was about three miles distant. We stood on our course, as nearly as we could judge, about fifteen minutes, and then went about so as to reach the south shore, and know where we were. To our astonishment we found that we were to windward of our wharf, had got home. The storm raged about three hours. The captain got in about two hours after we did. He reported that for about one and a half hours he just held his own. He was a whaler, and a rough one, and he said he thought that was doing d—— well, and it was, in such a storm and rough time. This boat was the first crude one on the buoyancy-clothed principle. A brief description of her possibly may be of interest to your readers. As I have said above, she probably was the lightest boat of her size ever built, and used no ballast. She was ten feet wide on deck, but at her water line only six feet. She was not flat. On the contrary, she had "sharp dead rise," and depended for stability entirely upon her sealed-in buoyancy. In sailing trim she was only six inches above the water, and offered but small resistance to the wind. She proved herself a storm bird in more than 100 storms in her lifetime, and settled the question beyond dispute that the wind can be utilized in its wildest moods, and to the best advantage. But she had not a moity of safety principle in her, as has the one I built in 1874. This one is life under all circumstances, as long as she is afloat. Twice has this one been struck with tempests directly on a lee shore, so near, in one, that she struck the rocks. In both cases with her sails only and no one at the tiller, she dashed through the wild waves away from the shore to windward. This is a long digression from the subject in hand, but it seemed to come in here naturally on the principle that "from little acorns great oaks grow." We will now resume the subject of auxiliary sails, the future propulsion.

A sailor dreads both a gale and a calm, but with auxiliary propulsion the gale will be welcome and the calm no longer dreaded, and the time of a passage decreased at least fifty per cent. I did not intend in this to say anything about the form of the hull of the safety ship, but the principle of sailing has so close a relation to the principles of the hull that I find it difficult to speak of one without referring to the other. In running before the wind with the safety ship it can not blow too hard for the sails, if she can keep up her motion. And to make great speed she must move faster than the waves. If an ordinary vessel does this, after she has mounted a wave and pitched over she makes a rapid descent and runs her bow into the next wave, which checks her motion, and if she has large sail set it is liable to be split at that time. Swift and steady motion is safety to the sail. The form of the new ship is such that she can not have her motion checked. She cuts a piece out of the wave and her ploughs undermine it and gravity levels it, and the vessel has to do no climbing. The most valuable work the auxiliary sails do is when the course of the wind is at, or near, an angle of forty-five degrees from the wind with her sails set for it. It is impossible for her to change from her course, and her steadiness is such that she can carry large sails, and with them and her steam get an unprecedented speed.

The illustration spoken of above has in it five, short, strong masts. One of the fore masts stands on her weather side one-fourth of her length from the stem. Her main mast is at her center, exactly amidship. One of her mizzen masts is on her lee quarter. One of her bowsprits is on her weather side, and hinged near the foot of her weather fore mast, and can be set at any desired angle. The jib, when set, is at an angle close on the wind, which just places its leach to windward of the luff of her weather fore sail, so that the wind can spill from the jib into the fore sail. The fore sail is so set that the wind can pass from it at the luff of the main sail in the same plane as the jib. The main sail is set in the same plane and passes its wind into the mizzen sail at its luff. This combination gives a plane of sail nearly the whole length of the vessel, and as high as practicable, probably about one-fourth her length. All the wind the vessel meets can be utilized, with this combination, to the best possible advantage. In running with this combination only it would need a man at the wheel, the same as any other vessel, but the sail is so equalized that there is no danger of broaching or griping. If it is desirous to put her on this course without a man at the wheel, then her weather mizzen sail must be set (her fore and mizzen masts are opposite each other.) With that set she can not change from her course. She has seven working sails, and they can all be set on this course. They are all handled on deck. Often there are long times of light winds and calms, when sails will not be needed, or be of any use. The arrangement of the sails is such that they can be bent, or unbent, nealy as quick as they can be furled, or unfurled, and can be put under cover.

No man can question the need or desire for the advantages that I have pointed out above, whatever he may say about the possibility to attain them, and I make the assertion here that all the points have been proved by practical use, also that it will take but a short time to prove this truth, if Congress will appoint a board of scientists, of known science, to examine the theories and see just what relation science has to them, and also see just what relation science has to naval architecture as now practiced.

Yours truly,

JOSEPH W. NORCROSS.

BUTLER'S PIRATE SCHOONER.

In 1881 an American whaler, heavily laden with sea elephant oil and South Sea Island seal skins, was working her way from the islands of the Antarctic ocean, bound home. The trip had been very successful, and the vessel was laden with a valuable cargo. When near Desolation Island a hurricane was encountered, and in spite of every effort to save her, the vessel was driven into the breakers of Desolation Island, her masts were carried away and a portion of her crew washed overboard and drowned. Several of the crew, however, including the captain, John Easmond, and the colored steward, clung to the wreck, and as soon as the sea had abated somewhat attempted to land on the island in one of the ship's boats. The attempt proved disastrous, the boat being dashed on the heavy boulders lining the shore, and but two men, Captain Easmond and the steward, P. M. Olsen, of Baltimore, succeeded in landing. These two men, cast ashore on a desolate island, subsisted for several months on wild birds, which they killed with stones; and eggs, with which the island was covered. In the meantime, the wrecked vessel held together, and with every succeeding gale was washed further on the shore, so that at ordinary times she lay quite high and dry. Months afterward a whaling vessel hove to off the island, searching for fresh water, and discovered the castaways. Their story was soon told, and when the ship sailed she carried away as passengers the shipwrecked mariners. They arrived in this city, and in telling the story of the wreck of their vessel, also stated that her cargo was intact, in good condition, and could easily be secured. Captain Robert Tarr, of Gloucester, heard of their adventures, and, together with General Benjamin F. Butler, decided to make an attempt to secure the spoils. On August 12th considerable excitement was caused in Halifax, N. S., by the statement there made, and widely telegraphed over the United States and Canada, that the schooner Conquest had been purchased by parties from the United States, and was to be used for, as was then stated, piratical purposes. It was then asserted, and not denied, that the schooner was purchased by Robert Tarr, of Gloucester, and Benjamin F. Butler, of Lowell, and what these two well known politicians could want with an old schooner formed a good foundation for stories by gossipers throughout the country. It now appears that the schooner was purchased by these gentlemen for the purpose of seeking and securing the abandoned cargo of this South Sea whaler, ashore on Desolation Island. The schooner sailed from Halifax, August 15, 1882, with orders to call at Cape Town and wire her arrival. From the time she sailed from Halifax up to now, not a word has been heard from her, and she has been given up for lost. Her commander was the rescued captain of the lost whaler, John Easmond, hailing from South Boston, and her crew list comprised the following: William Hilchey, Halifax, first mate; Fred Hilchey, Halifax, second mate; Joseph Matthews, Halifax, cooper; P. M. Olsen, cook; James Spicer, John Carigan, James Deady, John Surcell, David Frasor, Edmund Little, and P. Byrnes, seamen, all of Halifax.—*Boston Globe.*

A CANAL PROJECT.

During the year that Congressman Carleton was mayor of Port Huron, the feasibility of a scheme to construct a canal from the shore of Lake Huron, between Huronia Beach and Brighton Beach, to Black River, near the race of the old Harrington mill, was discussed in the Times. The project has lately been revived, and efforts will be made to secure the construction of the proposed canal.

Those who have considered the proposition concede that general navigation and also the city, would be greatly benefited by the canal. Vessel and lumber men now experience great delay and often serious loss during storms when they are on Lake Huron and desire to enter St. Clair river. Rafts of logs have been broken up and lost and vessels damaged in trying to reach the river during a violent gale, and the marine interests have long felt the need of an improvement that would afford protection at such times. The cutting of a canal, as proposed, it is believed, would afford ample protection and expedite navigation. Engineers consider the scheme feasible and one that would not require an extravagant expenditure of money. A breakwater would also have to be constructed in Lake Huron, forming a bay that would be an excellent harbor for vessels.

The grade is reported to be sufficient to cause an easy current, which would be a great improvement over the laborious work of pulling through the rapids at the head of St. Clair river, and vessels would be able to make more rapid transit. The current would also be strong enough to make Black river a desirable stream to carry off the sewage of the city, and the building of sewers to empty into Black river would not be as expensive as if they were laid to St. Clair river.

But one of the most important benefits that Port Huron would derive from the canal, would undoubtedly be the opening up of Black river above the Seventh street bridge to many manufactories. Salt blocks and car shops are probable industies that will, in the near future, be located on the river, and with safe navigation their establishment might be advanced.

To secure the construction of the canal it is proposed that an appropriation be made by the State, and that Congress be asked to make an appropriation for building the breakwater. Congressman Carleton and other citizens have interested themselves in the scheme for the past three years, and when the proper time comes Mr. Carleton can be relied upon to use his influence in Congress to obtain the necessary appropriation. Considerable attention will probably be devoted to the canal project at the next session of Congress, and its warmest advocates hope that it will be successful.—*Port Huron Times.*

FRAILTY OF BRITISH TONNAGE.

Attention was recently drawn in England to the loss of life among British sailors; it being stated that causalties occur to nearly three thousand vessels yearly involving the drowning of at least as many seamen. The chief cause of this, it is claimed, is to be found in the vessel itself which as at present constructed presents many vulnerable points and for that reason stands a great chance of destruction in case of a collision. It does not seem right that this should be so, and if the facts in the case justify the complaint as regards the general frailty of vessels, it would appear that either the requirements of underwriters have not strictly been lived up to, or else those requirements are not adequate to the necessities of the present age. No vessel, to be sure, is practically unsinkable, but it is hardly to be supposed that all vessels are generally so poorly constructed as to justify such wholesale condemnation as the above statement seems to imply.—*Trade Reporter.*

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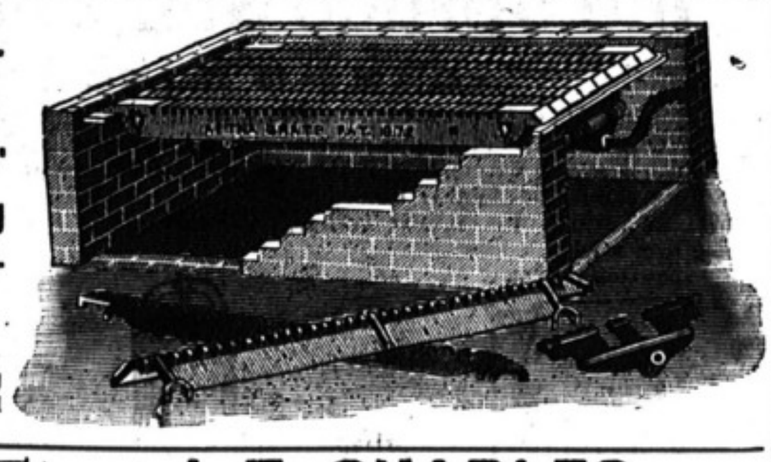

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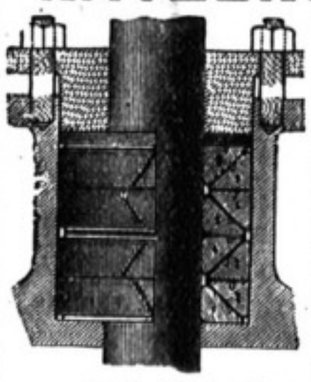

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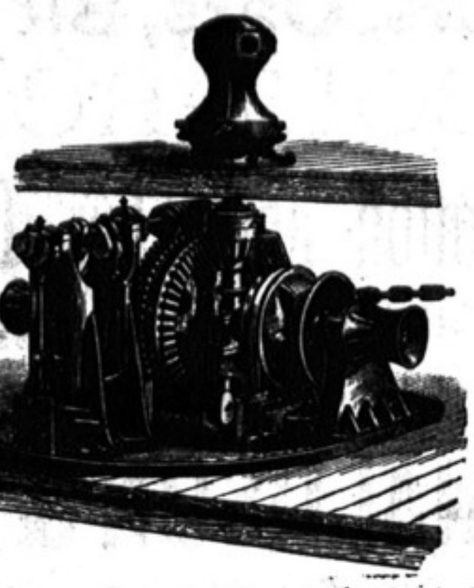

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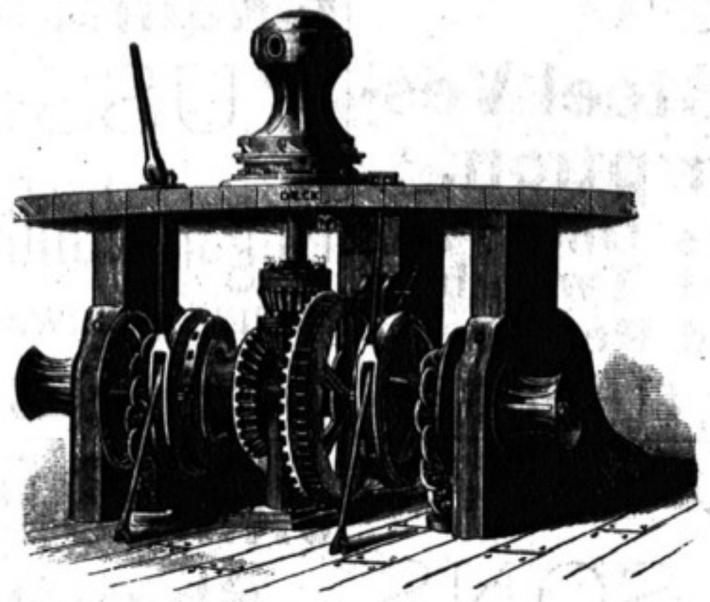

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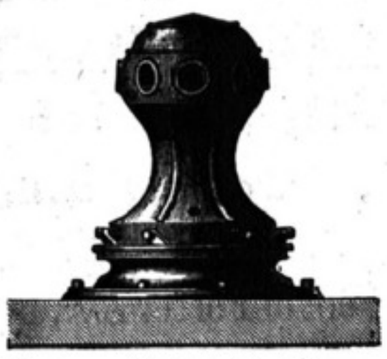

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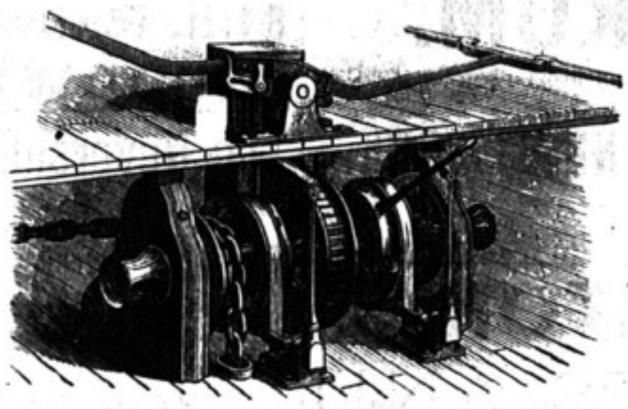

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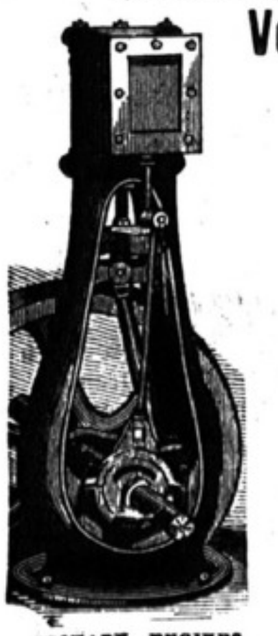

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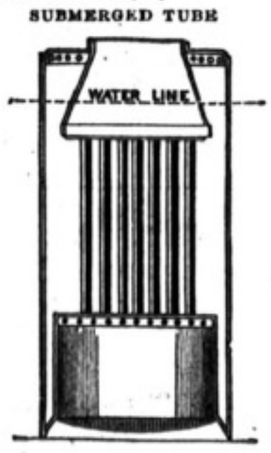

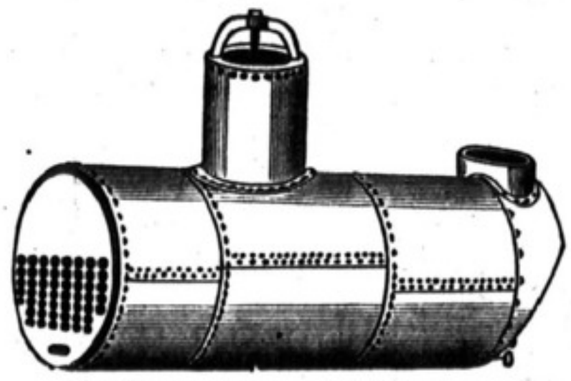

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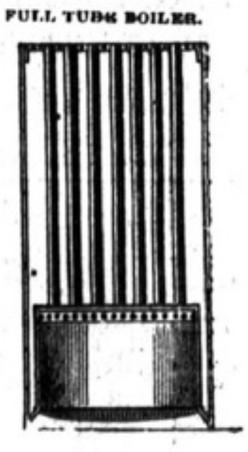

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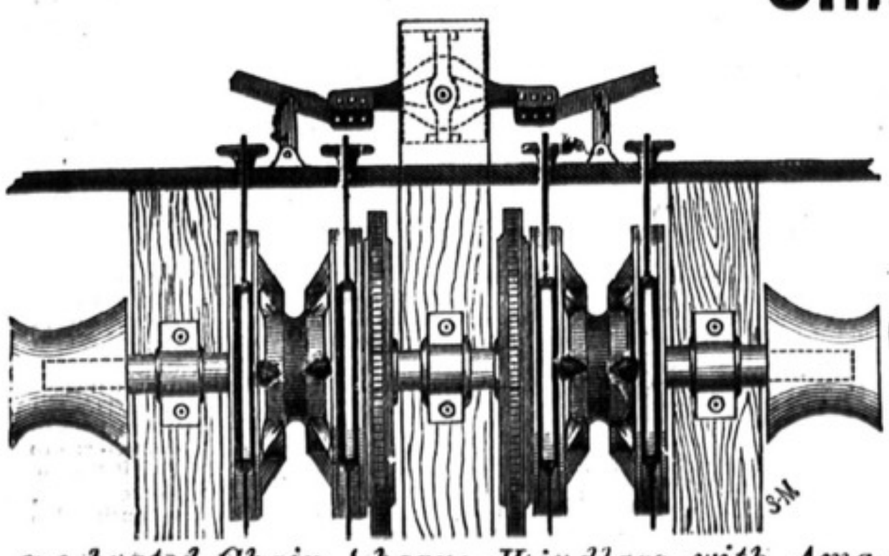

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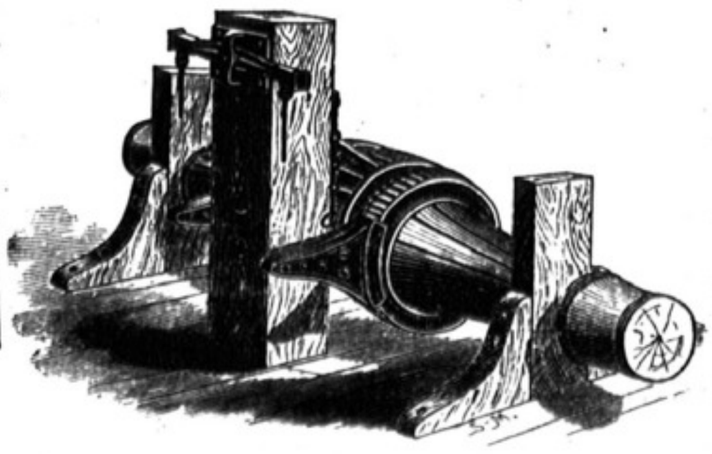

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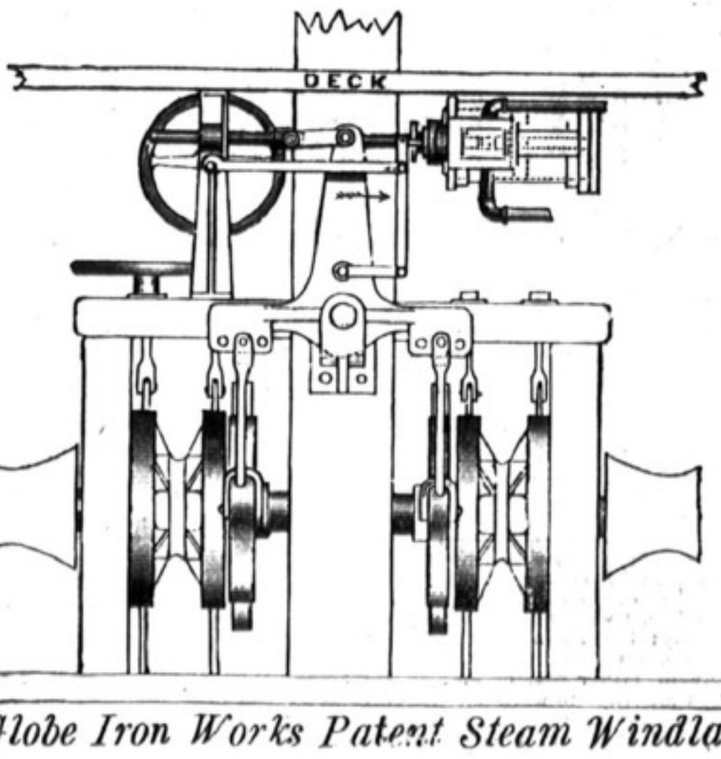

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